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SUPPORT BASE FOR HOUSEHOLD APPLIANCES
[Sockelgestell für Haushaltsgeräte]

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Description

The subject matter of the present invention relates to a support base for household appliances such as washing machines, dryers and dishwashers, comprising a substantially square-shaped support plate with a shelf surface for the household appliance which is fitted with adjustable legs, said support plate having downwardly bent edge strips along its edge and downwardly projecting support legs that are rigidly affixed to the corner areas of the support plate, said support legs preferably being made of sheet metal components that are bent around the corners of the support plate.

Household appliances of the type described above must stand in a plumb upright position to ensure proper operation. To level the appliance, adjustable legs, as a rule in the form of threaded legs, are provided so as to compensate for uneven floors. However, the working height of the household appliance which is predetermined by the operating elements cannot be appreciably adjusted by these legs. One disadvantage is that the height of the conventional household appliances is unfavorable from the standpoint of an ergonomic operation. This disadvantage can be avoided by using support bases, as known, for example, from DE-GM 297 10 601 and 297 14 220. The prior-art support bases have securing elements for stabilizing the household appliance, which securing elements can be moved in diagonally oriented slotted holes of the support plate and can be affixed to said support plate. It was found that because of these securing elements, considerable time and effort is required to assemble and install the support base. The securing elements must be assembled very accurately in order to prevent the household appliance from shifting its position on the support plate.

Thus, the problem to be solved by the present invention is to improve the support base of the type described above so that the assembly of the support base and the installation of the household appliance on the support base is simplified.

To solve this problem, the combinations of characteristics disclosed in Claims 1 and 10 are proposed. Useful embodiments and further developments of the invention follow from the dependent claims.

A first characteristic of the invention that is necessary for the definition of the invention is that trough-like recesses for receiving one of the leg components of the household appliance are molded into the shelf surface of the support plate above each support leg. The trough-like recesses can be cut into the support surface. These recesses preferably have a flat bottom and a cylindrical or conical side wall. Each trough-like recess should have a drainage hole disposed in the floor, via which drainage hole potentially leaked water can be drained off.

According to one preferred embodiment of the present invention, two adjacent support legs are joined together in one piece along the corner sections that face each other, thereby forming a cover panel. In order to compensate for uneven floors, it is useful to ensure that the lower edge of the cover panel is set back with respect to the foot edge of the support legs. Along the upper ends of their corner sections, the support legs are preferably screwed to two adjacent edge strips that are bent around the corners of the support plate.

According to another preferred or alternative embodiment of the present invention, a plurality of retaining elements, each of which form-fittingly engages over one adjustable leg each of the household appliance, are detachably attached to the support plate. The retaining elements are preferably designed in the form of angle brackets with an attachment arm that can be screwed to one of the edge strips of the support plate and with a holding-down arm that engages over one of the adjustable legs of the household appliance. The holding-down arm has a cutout that is open toward one end so as to be able to receive an adjustable spindle that holds the adjustable leg. A reliable connection between the support base and the household appliance is obtained if the cutout in the holding-down arm is designed as a slotted hole that is open toward one end and oriented parallel to the corner edge of the retaining element. Preferably, two

cutouts, each being open toward respectively opposite ends, are disposed on the holding-down arm. The assembly of the retaining elements is simplified if the screw holes in the attachment arm of the retaining element are designed as slotted holes that run substantially parallel to the corner edge. Because of the resultant tolerances in the production of the trough-like recesses and the leg elements, it is advantageous if the area halfway along the length of the slotted holes is slanted with respect to the corner edge. In this manner, it is possible to take advantage of the wedge effect of the slanted surface of the slotted holes to ensure an additional friction-loaded connection between the support base and the adjustable leg.

To improve the positional stability, may be useful if a base plate that can be placed on and preferably attached to the floor and that has an upwardly bent edge rim is provided for each support leg, on which base plate the foot edge of the support leg can be placed.

The invention will be described in greater detail below based on a practical example shown in the schematic drawing.

Figure 1 shows a diagrammatic exploded view of a support base for household appliances;

Figure 2 shows the support base seen in Figure 1 after assembly;

Figure 3a shows the support base seen in Figure 2 as a washing machine is being mounted on it;

Figure 3b shows an enlarged area as identified in Figure 3a; and

Figures 4a through c show the support base after installation of the washing machine, and the assembly sequence of the retaining element.

The support base 10 shown in the drawings serves as a substructure support for a household appliance with adjustable legs 12 which, by way of an example, is shown as a washing machine 14 in the drawing.

The support base substantially comprises a substantially square-shaped support plate 18 with a shelf surface 16 for the washing machine 14, two support legs 20 in the rear and two support legs 22 in the

front. Along the edges, the support plate has downwardly bent edge strips 24, to which the support legs 20,22 can be rigidly attached by means of screws 26 that extend through bores 28,30. The support legs 20,22 are made of sheet metal components that are bent around the corners of the support plate, with each of the rear support legs 20 being a separate entity, while the front support legs 22 are joined together in one piece by means of their corner sections that face each other, thereby forming a cover panel 32. The lower edge 34 of the cover panel 32 is set back with respect to the foot corners 36 of the support legs 22. Each of the foot corners 36 of the support legs 20,22 is positioned on a base plate 38 which has a triangular shape and an upwardly bent edge rim 40, which base plate can optionally be screwed to the floor.

A trough-like recess 42, which has a flat bottom 44 and a conical side wall 46 and into which one each of the adjustable legs 12 of the washing machine 14 can be placed, is molded into the shelf surface 16 of the support plate 18 above each of the support legs 20,22 (Figures 3a and b). In the bottom 44 of the recesses 42, drainage holes 47 are disposed.

To rigidly anchor the washing machine 14 to the support base 10, retaining elements 48 are additionally provided, which retaining elements, after assembly is completed, engage form-fittingly over the plate-like foot elements 50 of the adjustable legs and can be secured to the support base 10 by means of some of the screws 26. The retaining means 48 are preferably designed in the form of angle brackets having an attachment arm 52, which can be screwed to one of the edge strips 24 of the support plate 18, and a hold-down arm 54 that engages over the plate-like foot elements 50. The hold-down arms 54 have two cutouts 56, each being open toward respectively opposite ends, which cutouts serve to allow an adjustable spindle 58 of the adjustable leg 12 to pass through. Disposed in the attachment arm 52 are slotted holes 60 which are oriented substantially parallel to the corner edge 62 of the retaining element 48 and which, in the area 64 halfway along their length, are slanted toward the corner edge. These

measures make it possible to mount the retaining elements 48 from one side on the adjustable leg and to secure them to the support base 10 with one of the pair of screws 26. The slanted areas 64 halfway along the length of the slotted holes make it possible to compensate for the tolerances and, at the same time, ensure a friction-loaded connection with the plate-like foot elements 50.

To summarize: The present invention relates to a support base for household appliances such as washing machines, dryers and dishwashers. The support base comprises a support plate 18 which has a shelf surface for holding the household appliance, said appliance being fitted with adjustable legs 12, and downwardly bent edge strips 24 along its edges. Disposed in the corner areas of the support plate 18 are downwardly projecting support legs 20,22 which are preferably made of sheet metal components that are bent around the corners of the support plate. Trough-like recesses for receiving one each of the adjustable legs of the household appliance 14 are molded into the shelf surface 16 of the support plate 18 above each support leg 20,22.

Claims

1. A support base for household appliances, such as washing machines, dryers and dishwashers, comprising a substantially square-shaped support plate (18) with a shelf surface (16) for the household appliance (14) which is fitted with adjustable legs (12), said support plate having downwardly bent edge strips (24) along its edge, and downwardly projecting support legs (20,22) that are rigidly affixed to the corner areas of the support plate (18), said support legs preferably being made of sheet metal components that are bent around the corners of the support plate, characterized in that above each support leg (20,22), trough-like recesses (42) for receiving one each of the adjustable legs (12) of the household appliance (14) are molded into the shelf surface (16) of the support plate (18).

2. The support base as in Claim 1, characterized in that the trough-like recesses (42) are punched into the support plate (18).

3. The support base as in Claim 1 or 2, characterized in that the trough-like recesses (42) have a flat bottom (44).

4. The support base as in one of Claims 1-3, characterized in that the trough-like recesses (42) have a cylindrical or conical side wall (46).

5. The support base as in one of Claims 1-4, characterized in that a drainage hole (47) is disposed in the floor of each trough-like recess (42).

6. The support base as in one of Claims 1-5, characterized in that two adjacent support legs (22) are joined together in one piece along their corner sections that face each other, thereby forming a cover panel (32).

7. The support base as in Claim 6, characterized in that along its lower edge (34), the cover panel (32) is set back from the foot edges (36) of the support legs (22).

8. The support base as in any one of Claims 1-7, characterized in that the support legs (20,22), at the upper end of their corner sections, are screwed to two adjacent edge strips (24) that are bent around the corners of the support plate.

9. The support base as in any one of Claims 1-8, characterized in that a plurality of retaining elements (48), each of which form-fittingly engages over one adjustable leg (12) of the household appliance (14), can be detachably attached to the support plate (18).

10. The support base for household appliances, such as washing machines, dryers and dishwashers, comprising a substantially square-shaped support plate (18) with a shelf surface (16) for the household appliance (14) which is fitted with adjustable legs (12), said support plate having downwardly bent edge strips (24) along its edge, and downwardly projecting support legs (20,22) that are rigidly affixed to the

corner areas of the support plate (18), said support legs preferably being made of sheet metal components that are bent around the corners of the support plate, characterized in that a plurality of retaining elements (48), each of which form-fittingly engages over one adjustable leg (12) of the household appliance (14), can be detachably attached to the support plate (18).

11. The support base as in Claim 9 or 10, characterized in that the retaining element (48) is designed in the form of an angle bracket with an attachment arm (52) that can be screwed to an edge strip (24) of the support plate (18) and a holding-down arm (54) that engages over a foot element (50) of the adjustable legs (12).

12. The support base as in Claim 11, characterized in that the holding-down arm (54) has at least one cutout (56) that is open toward one end so as to be able to allow an adjustable spindle (58) disposed on the adjustable leg (12) to pass through.

13. The support base as in Claim 12, characterized in that the cutout (56) in the holding-down arm (54) is designed as a slotted hole that is open toward one end and oriented parallel to the corner edge (52 [sic; 62]) of the angle bracket that forms the retaining element (48).

14. The support base as in Claim 13, characterized in that the holding-down arm (54) has two cutouts (56), each being open toward respectively opposite ends.

15. The support base as in one of Claims 12-14, characterized in that slotted holes (60) that are oriented substantially parallel to the corner edge (62) are disposed in the attachment arm (52) of the retaining element (48).

16. The support base as in Claim 15, characterized in that the slotted holes (60) in the attachment arm (52), in the area (64) halfway along their length, are slanted toward the corner edge (62).

17. The support base as in any one of Claims 1-15, characterized in that a base plate (38) which has an upwardly bent edge rim (40) and which can preferably be attached to the floor is provided for the support leg.

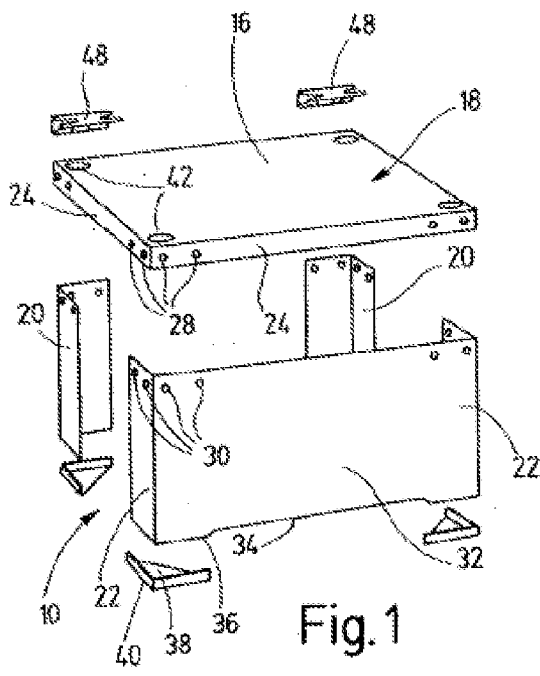


Fig. 1

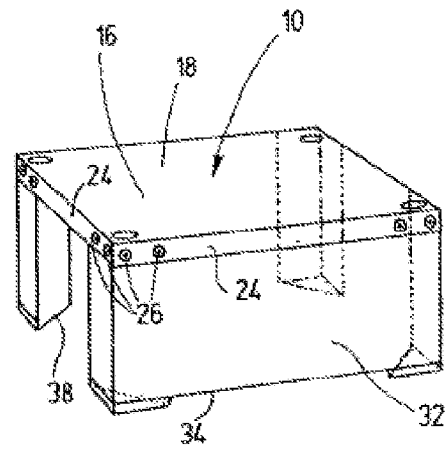


Fig. 2

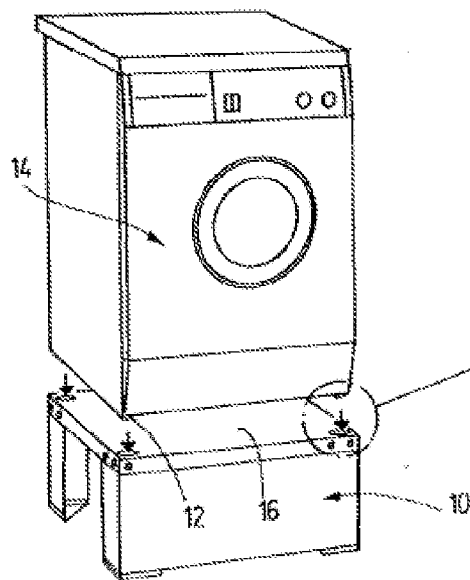


Fig. 3a

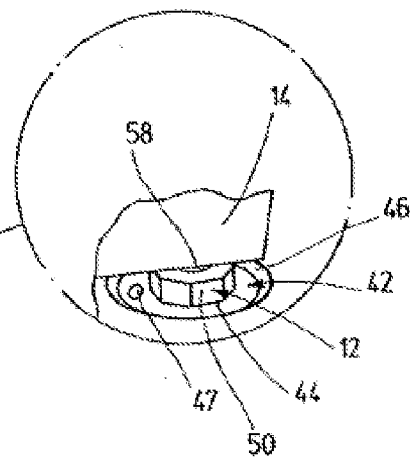


Fig. 3b

Fig. 4b

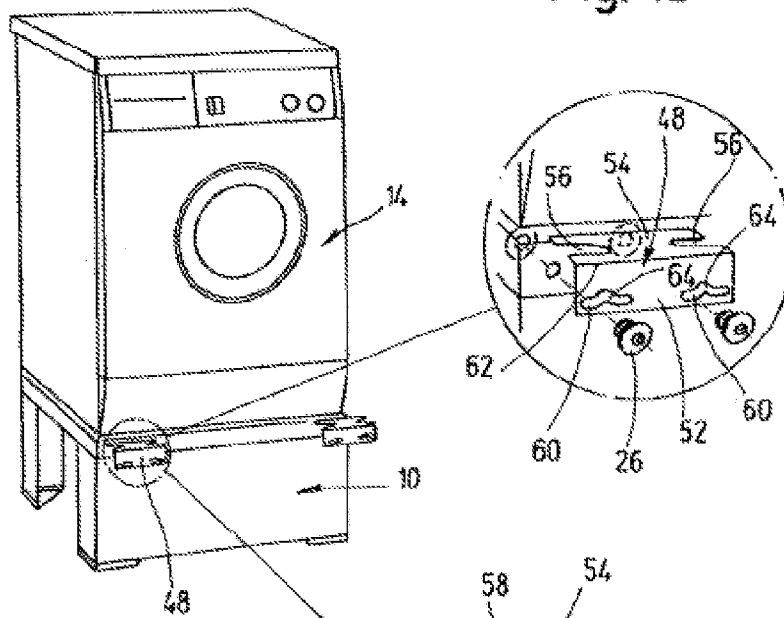


Fig. 4a

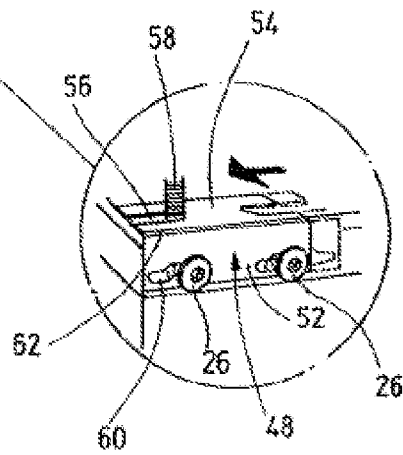


Fig. 4c